

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA DESERT DISTRICT**

**ENVIRONMENTAL ASSESSMENT
EA Number: CA-670-EA-2001-58**

June 11, 2001

Project: Closure to motorized vehicle use of five areas in the Imperial Sand Dunes Recreation Area.

BLM Office: El Centro Field Office
1661 S. 4th St.
El Centro, CA 92243

Location of Proposed Action: Five locations are within the Imperial Sand Dunes Recreation Area, southeastern Imperial County, California. The locations are: 1) the Northern, 2) the Small Central, 3) the Large Central, 4) the Patton Valley Area, and 5) the Southern Closures.

Land Use Conformance and Other Regulatory Compliance: This closure conforms to the *California Desert Conservation Area (CDCA) Plan* (1980), as amended, the *Recreation Area Management Plan and Environmental Assessment for the Imperial Sand Dunes* (1987), the *Algodones Dunes Wildlife Habitat Management Plan* (1987), and the *Endangered Species Act*, Section 7 requirements.

Background: The Imperial Sand Dunes Recreation Area (ISDRA) was established in the *Recreation Area Management Plan of 1977*, as an area open to off-highway vehicle (OHV) use. Under regulations of the *California Desert Conservation Area Plan*, 1980, as amended, the Dunes have been managed as an area open to intensive OHV use. The BLM estimates that over 600,000 visitors come to these sand dunes each winter season for day-use riding or to camp over weekends and ride in the dunes.

Concerns expressed about potential threats to the continued existence of the endemic plants of the dunes resulted in surveys conducted in 1977 and 1998. Monitoring conducted by BLM in 1998 of the Peirson's milk-vetch, *Astragalus magdalenae* var. *peirsonii* identified several areas in the dunes outside the North Algodones Dunes wilderness where large colonies of Peirson's milk-vetch occur. Peirson's milk-vetch is a plant species listed in October, 1998 by the US Fish and Wildlife Service as threatened.

On March 16, 2000, the Center for Biological Diversity, and others (Center) filed for injunctive relief in U.S. District Court, Northern District of California (court) against the Bureau of Land Management (BLM) alleging that the BLM was in violation of Section 7 of the Endangered Species Act (ESA) by failing to enter into formal consultation with the U.S. Fish and Wildlife Service (FWS) on the effects of adoption of the California Desert Conservation Area Plan (CDCA Plan), as amended, upon threatened and endangered species. On August 25, 2000, the BLM acknowledged through a court stipulation that activities authorized, permitted, or allowed under CDCA Plan may adversely affect threatened and endangered species, and that the BLM is required to consult with the FWS to insure that adoption and implementation of the CDCA Plan is not likely to jeopardize the continued existence of threatened and endangered species or to result in the destruction or adverse modification of critical habitat of listed species.

Although BLM has received biological opinions on selected activities, consultation on the overall CDCA Plan is necessary to address the cumulative effects of all the activities authorized by the CDCA Plan. Consultation on the overall Plan is complex and the completion date is uncertain. Absent consultation on the entire Plan, the impacts of individual activities, when added together with the impacts of other activities in the desert are not known. The BLM entered into negotiations with plaintiffs regarding interim actions to be taken to provide protection for endangered and threatened species pending completion of the consultation on the CDCA Plan. Agreement on these interim actions avoided litigation of plaintiffs' request for injunctive relief and the threat of an injunction prohibiting all activities authorized under the Plan. These interim agreements have allowed BLM to continue to authorize appropriate levels of activities throughout the planning area during the lengthy consultation process while providing appropriate protection to the desert tortoise and other listed species in the short term. By taking interim actions as allowed under 43 CFR Part 8364.1, BLM contributes to the conservation of endangered and threatened species in accordance with 7 (a) (1) of the ESA. BLM also avoids making any irreversible or irretrievable commitment of resources which would foreclose any reasonable and prudent alternative measures which might be required as a result of the consultation on the CDCA plan in accordance with 7 (d) of the ESA. On November 3, 2000, the stipulation respecting Peirson's milk-vetch became effective.

Purpose and Need: The purpose of these closures is to prevent potential effects to several large populations of Peirson's milk-vetch from off highway vehicles. 1998 monitoring indicates that many of the largest colonies of the Peirson's milk-vetch are located within the closure boundaries. The data does not indicate a decline in populations in the closure areas. However historically use has been classified as minimal and the area was designated as a "limited use" open area in the 1980 California Desert Plan. User numbers have increased during the past 20 years and it is reasonable to believe that an increase is expected in the future. It is unknown to what degree Peirson's milk-vetch are impacted by motorized vehicles. These closures are designed to protect the largest known populations of Peirson's milk-vetch. Available research indicates that the Imperial Sand Dunes are the only known place that the threatened plant occurs. The closures to off-highway vehicle (OHV) use are consistent with Section 7 of the *Endangered Species Act* that require the BLM to consult with the FWS on potential effects to listed plant or animal species. The closures to OHV use would be in effect until both the completion of programmatic consultation on the CDCA Plan between the BLM and the FWS and the amendment of the CDCA Plan with permanent measures to protect and conserve Peirson's milk-vetch.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action:

Five parcels (see attached maps) in the Imperial Sand Dunes Recreation Area would be closed to motorized vehicle use. The closure boundaries would be identified by sign posts. In the *AMENDED STIPULATION AND ORDER CONCERNING INJUNCTIVE RELIEF FOR THE PEIRSON'S MILK-VETCH*, Case No. C-00-0927 WHA-JCS; four closure areas were named. The fifth parcel was unnumbered, but was described as the Patton Valley Area, on page 6 of the stipulation.

The combination of this alternative and the approximately 32,000 acres that makes up the existing North Algodones Dunes Wilderness, would close approximately 54% of the recreation area to motorized use.

Parcel 1 (MAP 1), the **Northern Closure** is bounded on the southeasterly side by the North Algodones Wilderness Area, on the northeasterly side by Niland-Glamis Road, on the north side by a latitudinal line, and on the southwesterly side by the New Coachella Canal Road. Said parcel contains 3,800 acres more or less, and is more particularly described as follows:

Beginning at the northwesterly corner of the North Algodones Wilderness Area; thence southwesterly on a prolongation of the northwesterly line of the above mentioned wilderness area, approximately 300 feet to a line parallel with and 15.00 feet northeast of the center line of the New Coachella Canal Road (approximate geographic position: longitude 115.26404 degrees, latitude 33.06407 degrees); thence northwesterly, parallel with and 15.00 feet northeast of the center line of the New Coachella Canal Road, to a point at latitude 33.1038 degrees (approximate geographic position: longitude 115.31038 degrees, latitude 33.1038 degrees); thence east to a line parallel with and 20.00 feet southwesterly of the center line of Niland-Glamis Road (approximate geographic position: longitude 115.23364 degrees, latitude 33.1038 degrees); thence southeasterly, parallel with and 20.00 feet southwesterly of the center line of Niland-Glamis Road, to a prolongation of the northwesterly line of the North Algodones Wilderness Area (approximate geographic position: 115.23123 degrees, latitude 33.10230 degrees); thence southwesterly along said line of prolongation 85.00 feet to point 1 of the North Algodones Wilderness Area; thence continuing southwesterly along the northwesterly line of the wilderness boundary to the point of beginning.

Parcel 2 (MAP 2), the **Small Central Closure** contains 2,000 acres more or less, and is more particularly described as follows:

Beginning at longitude 115.09392 degrees, latitude 32.92036 degrees; thence to longitude 115.10286 degrees, latitude 32.91969 degrees; thence to longitude 115.10916 degrees, latitude 32.92183 degrees; thence to longitude 115.11854 degrees, latitude 32.93341 degrees; thence to longitude 115.12616 degrees, latitude 32.93998 degrees; thence to longitude 115.11041 degrees, latitude 32.95332 degrees; thence to longitude 115.09628 degrees, latitude 32.95288 degrees; thence to longitude 115.09225 degrees, latitude 32.94338 degrees; thence to point of beginning.

Parcel 3 (MAP 2), the **Large Central Closure** area is bounded on the northeasterly side by Wash Road, on the north side by a latitudinal line, on the southwesterly side by the Sand Highway, and on the southeasterly side by a line falling northerly of Patton Valley. Said parcel contains 43,035 acres more or less, and is more particularly described as follows:

Beginning at the point of intersection of a line parallel with and 20.00 feet northeasterly of the northeasterly edge of the Sand Highway and a line parallel with and 150.00 feet northwesterly of the center line of Patton Valley Road (approximate geographic position: longitude 114.96653 degrees, latitude 32.76586 degrees); thence northwesterly, parallel with and 20.00 feet northeasterly of the northeasterly edge of the Sand Highway, to a point at latitude 32.90653 degrees (approximate geographic position: longitude 115.11257 degrees, latitude 32.90653 degrees); thence east to a line parallel with and 20.00 feet southwesterly of the center line of Wash Road (approximate geographic position: longitude 114.95415 degrees, latitude 32.90653 degrees); thence southeasterly, parallel with and 20.00 feet southwesterly of the center line of Wash Road, to a point at latitude 32.83805 degrees (approximate geographic position: longitude 114.86802 degrees, latitude 32.83805 degrees); thence southwesterly to a line parallel with and 150.00 feet northwesterly of the center line of Patton Valley Road, at latitude 32.78236 degrees (approximate geographic position: longitude 114.95298 degrees, latitude 32.78236 degrees); thence southwesterly, parallel with and 150.00 feet northwesterly of the center line of Patton Valley Road, to the point of beginning.

Parcel 4 (MAP 2), the **Patton Valley Area** is bounded on the southwesterly side by the Sand Highway, on the northwesterly side by Patton Valley Road, with the remainder being defined by longitude and latitude. Said parcel contains 310 acres more or less, and is more particularly described as follows:

Beginning at the point of intersection of a line parallel with and 20.00 feet northeasterly of the northeasterly edge of the Sand Highway and a line parallel with and 150 feet southeasterly of the center line of Patton Valley Road; thence northeasterly, parallel with and 150.00 feet southeasterly of the center line of Patton Valley Road, to a point at latitude 32.77713 degrees (approximate geographic position: longitude 114.95341 degrees, latitude 32.77713 degrees); thence easterly, leaving said road, to longitude 114.94770 degrees, latitude 32.77746 degrees; thence to longitude 114.94433 degrees, latitude 32.77629 degrees; thence to longitude

114.94401 degrees, latitude 32.77449 degrees; thence to longitude 114.94708 degrees, latitude 32.77218 degrees; thence to longitude 114.95472 degrees, latitude 32.76916 degrees; thence southwesterly to a line parallel with and 20.00 feet northeasterly of the northeasterly edge of the Sand Highway, at latitude 32.76222 degrees (approximate geographic position: longitude 114.96253 degrees, latitude 32.76222 degrees); thence northwesterly, parallel with and 20.00 feet northeasterly of the northeasterly edge of the Sand Highway, to the point of beginning.

Parcel 5 (MAP 3), the Southern Closure contains 160 acres more or less, and is more particularly defined as follows:

Beginning at longitude 114.91070 degrees, latitude 32.72160 degrees; thence to longitude 114.90878 degrees, latitude 32.72476 degrees; thence to longitude 114.88818 degrees, latitude 32.73669 degrees; thence to longitude 114.88740 degrees, latitude 32.73596 degrees; thence to longitude 114.88947 degrees, latitude 32.73446 degrees; thence to longitude 114.90607 degrees, latitude 32.72473 degrees; thence to longitude 114.90562 degrees, latitude 32.72310 degrees; thence to longitude 114.90739 degrees, latitude 32.7286 degrees; thence to longitude 114.91026 degrees, latitude 32.72092 degrees; thence to point of beginning.

In all five areas, the longitudes and latitudes are based upon the North American Datum of 1983, and were derived from the Bureau of Land Management's Base Cartographic Data as depicted in the exhibits for the above-mentioned case. Longitudinal and latitudinal coordinates are informative calls and shall yield to the physical features where cited. More accurate positions will be collected and recorded when the official survey is performed.

REASONABLE ALTERNATIVES:

No Action Alternative: Do not close the five areas to OHV use in the Imperial Sand Dunes Recreation Area. This alternative would maintain the existing motorized closure of the North Algodones Dunes Wilderness which is approximately 21% of the area.

AFFECTED ENVIRONMENT:

Location and Size: The 150,000-acre Imperial Sand Dunes are the largest mass of sand dunes in California. They extend in a band averaging five miles wide for more than 40 miles along the eastern edge of the Imperial Valley agricultural region. The dunes are bordered roughly on the west by the Coachella Canal. On the east side, a major route of the Union Pacific railroad skirts the dunes. (Refer

to Map 2)

The dune system is divided into 3 areas: The northern area is known as Mammoth Wash. The middle area, located south of Mammoth Wash is the North Algodones Dunes Wilderness,. It was established by the 1994 California Desert Protection Act. That area is closed to OHV and mechanical uses. Access is by hiking and horseback only. The third area begins at Highway 78, continues south past Interstate Highway 8, to the Mexican border and is the largest and most heavily used area.

Topography: The sand dune system is situated on a relatively flat plain which has an elevation of approximately 50 feet above sea level. On the west, the plain is called East Mesa (because it is east of the Imperial Valley). On the east, the plain is called Pilot Knob Mesa.

Soils and Watershed: Soils are sand, with areas of surface clays found on the relatively level borders on the eastern and western sides of the sand dune belt. The remainder of the area consists of an actively moving dunes system composed of quartz sand. Movement of sand in this area is natural, in fact it has been calculated that the dunes are moving to the southeast at a minimum rate of 13.5 meters per 1000 years (Sweet 1988). Isolated pockets of clay soils and sand with a clay crust occur within the dunes.

Vegetation: Constant movement of the sand and lack of water near the surface have produced a relatively sparse vegetation cover, although a number of highly adapted species are common. Creosote bush extends into the dunes from the surrounding desert along both the east and west edges of the dune system.

The secondary dunes are interrupted in places by basins or flats which support stands of trees such as mesquite, smoketree, ironwood, paloverde and desert willow. These east side basins or pockets are especially common north of Highway 78.

The difference in vegetation between the west and east side of the dunes is due largely to the amount of water available. Both sides receive very little precipitation. The moisture difference between west and east is largely attributable to the topography of the surrounding lands. North of Highway 78, intermittent streams draining the nearby Chocolate Mountains flow westward to the eastern edge of the dunes, which act like a dam to hold the water. Ponds form in the wooded eastside pockets during the springtime of wet years, supporting a flurry of life.

Other species including Peirson's milk-vetch, federally listed status of threatened (October 1998),

extend into the central dunes. It is listed as endangered by the state of California. The California Native Plant Society lists it as category 1B (rare in California and elsewhere). The milk-vetch is found in highest-density stands in the lee (protected from prevailing winds) sides of the large sand dunes. Those dunes are generally found between the North Algodones Dunes Wilderness north of Highway 78 and Interstate Highway 8. The stands of highest density are readily identified in localized areas. The existing level of use and extent of long distance travel from existing camping spots naturally limits the number of vehicles driving to those sites in the central part of the dunes with high plant density.

In addition to Peirson's milk-vetch, five other sensitive plant species inhabit the Imperial Sand Dunes. Algodones dunes sunflower is known in California only from these dunes. It is a large, silver-leaved plant with yellow flowers occurring primarily in the interior portions of the dunes at the bases and along the sides of large dunes. Wiggin's croton is a shrubby silvery plant found primarily in the western half of the dunes. Giant Spanish needle has dark green linear leaves and heads of pink flowers. It is endemic to the Imperial Sand Dunes and grows throughout the dunes system. Sandfood is unusual in that it is a root parasite primarily on dunes buckwheat (*Eriogonum deserticola*), plicate-leaved coldenia (*Tiquilia plicata*) and burrobush (*Ambrosia dumosa*). The only parts of this plant visible above ground are the fuzzy flower heads that appear in late winter and spring. Sandfood occurs primarily along the east and west sides of the dunes. Borrego milk-vetch is known to occur in the Imperial Sand Dunes only in the southeastern corner in depressions among low dunes. It is similar in appearance to Peirson's milk-vetch but has larger green leaves and darker purple flowers.

SPECIAL STATUS PLANTS OF THE IMPERIAL SAND DUNES

COMMON NAME	SPECIES	FEDERAL STATUS	STATE STATUS	CNPS STATUS
Borrego Milk-vetch	<i>Astragalus lentiginosus</i> var. <i>borreganus</i>	None	None	4 (limited distribution)
Peirson's Milk-vetch	<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	Threatened	Endangered	1B (rare in CA and elsewhere)
Wiggins' Croton	<i>Croton wigginsii</i>	None	Rare	2 (rare in CA)
Silver-leaved Dune Sunflower	<i>Helianthus niveus</i> ssp. <i>tephrodes</i>	Species of Concern	Endangered	1B (rare in CA and elsewhere)
Giant Spanish Needle	<i>Palafoxia arida</i> var. <i>arida</i>	Species of Concern	None	1B (rare in CA and elsewhere)
Sandfood	<i>Pholisma sonora</i>	Species of Concern	None	1B (rare in CA and elsewhere)

Wilderness: North Algodones Dunes Wilderness Area comprises approximately 32,000 acres of the Imperial Sand Dunes Recreation Area (approximately 21% of the total area). After designation as a wilderness study area (WSA 360) in the 1970s, Congress designated the North Algodones Dunes as wilderness in 1994. The boundaries remain open and are posted. However the climatic conditions of the desert and vandalism have made sign maintenance difficult. Not all areas may be posted at all times. OHV intrusions have been identified, although they appear to correlate to hunting season access.

Noxious and Invasive Species: Many areas within the ISDRA are relatively weed free. Sahara mustard (*Brassica tournefortii*) and Mediterranean grass (*Schismus* ssp.) occur frequently in the creosote bush scrub flats along the eastern and western flanks of the sand dunes. The actual dunes contain very few weeds. It is presumed that these introduced species are not able to adapt to the dryness and constantly blowing and shifting sand.

Wildlife: Most large wildlife species seek the protection of the heavier vegetation along the dune periphery, although such mammals as coyote and mule deer are occasionally seen crossing the dune system. Rabbits, ground squirrels, and a variety of birds, lizards, and insects are seen throughout the dunes, some of which are endemic. East of the northern dunes water flows in the washes from the Chocolate Mountains toward the eastern base of the sand dunes. The dunes act as a giant sponge, absorbing water and allowing underground movement through the dunes. Temporary pools may form at the base of the dunes providing important breeding sites for Couch's spadefoot toad.

Tables 1.1, 1.2 and 1.3 list amphibians, reptiles, birds, and mammals with Federal and State status that occur, or are likely to occur, in the Imperial Sand Dunes Recreation Area .

STATUS SPECIES

REPTILES & AMPHIBIANS Table 1.1

COMMON NAME	SPECIES	FEDERAL STATUS	STATE STATUS
Couch's Spadefoot Toad	<i>Scaphiopus couchi</i>	BLM Sensitive	Special Concern
Desert Tortoise	<i>Gopherus agassizi</i>	Threatened	Threatened
Colorado Desert Fringe-toed Lizard	<i>Uma notata</i>	BLM Sensitive	Special Concern
Flat-tailed Horned Lizard	<i>Phrynosoma mcalli</i>	Sensitive	Special Concern
Rosy Boa	<i>Lichanura trivirgata</i>	BLM Sensitive	None

BIRDS Table 1.2

COMMON NAME	SPECIES	FEDERAL STATUS	STATE STATUS
Gila Woodpecker	<i>Melanerpes uropygialis</i>	None	Endangered
Loggerhead Shrike	<i>Lanius ludovicianus</i>	None	Species of Concern
Burrowing Owl	<i>Athene cunicularia</i>	BLM Sensitive	Species of Concern
Merlin	<i>Falco columbarius</i>	None	Special Concern
Le Conte's Thrasher	<i>Toxostoma lecontei</i>	BLM Sensitive	Special Concern

MAMMALS Table 1.3

COMMON NAME	SPECIES	FEDERAL STATUS	STATE STATUS
Mountain Lion	<i>Felis concolor browni</i>	None	Special Concern

The desert tortoise inhabits microphyll woodland areas just east of the dunes, and are occasionally observed crossing Vista Mine Road. It may be likely that desert tortoise would occur in microphyll woodland on the edges of the dunes. No critical habitat occurs near the Imperial Sand Dunes.

The Colorado Desert fringe-toed lizard occurs throughout the Imperial Sand Dunes in psammophytic scrub and active dunes. The Imperial Sand Dunes are not part of a management area for the flat-tailed horned lizards, but the lizards appear to occur throughout the dunes. Flat-tailed horned lizards occur on the east and west edges of the dunes in creosote bush scrub, but have also been observed in the interior of the dunes on active dune habitat and in psammophytic scrub. Harvester ants, the flat-tailed horned lizard predominant prey, also occur throughout the dunes in creosote bush scrub, and psammophytic scrub. (Sebesta, Knauf, & Wright, 2001).

The rosy boa habitat borders the east side of the Imperial Sand Dunes, and although no records could be found, this reptile may inhabit areas in or near the recreation area.

The Gila woodpecker inhabits microphyll woodlands in and around the Imperial Sand Dunes. The loggerhead shrike inhabits creosote bush scrub, psammophytic scrub, and microphyll woodland in and around the Imperial sand dunes. Burrowing owls have been observed nesting in the Imperial Sand Dunes. The Imperial Valley also contains the largest population of burrowing owls in the state of California. The merlin is a small falcon that winters in and around the Imperial Sand Dunes. Lecontes thrasher forages and nests in and around the Imperial Sand Dunes.

The Yuma mountain lion can be found east of the Imperial Sand Dunes in the Cargo Muchacho and Chocolate Mountains. The mountain lion's predominant prey, burro mule deer, bed down and forage in microphyll woodlands in and around the dunes. The location of prey, as well as the availability of artificial water sources, makes the Dunes likely habitat for this species.

Cultural Resources: Sites have been reported and recorded in the Imperial Sand Dunes Recreation Area. The dunes contain little evidence of habitation. The dunes themselves were travel-ways between regions. They were important destinations, since important plant and animal foods occur in the dunes and water sources are common at their margins. Temporary campsites, often containing roasting pits, broken pottery and projectile points are found along the east and west edges of the dunes.

Historic cemeteries (dating from 1880-1930) are located at the railroad townsites of Amos, Glamis, and Ogilby. The Glamis and Ogilby cemeteries are on private property. Except for the cemeteries, which are posted with protective signs, little remains of these townsites. Remnants of the Plank Road, a single-lane wooden roadway utilized to cross the dunes between 1914 and 1926, can be seen at Grays Well. A fenced section of the road has been established to protect the site. All of these sites are outside the proposed interim closure boundaries but within close proximity.

Recreation: The Imperial Sand Dunes Recreation Area has one of the most intense and highly visited OHV areas in the Nation. Visitors travel from all over North America to ride their OHVs (quads, motorcycles, dune buggies, etc) in the dunes. Visitation can peak with over 100,000 visitors on Thanksgiving weekend and approximately 600,000 per use season. This area provides a one of a kind OHV recreational experience on Public Lands managed by the BLM. Visitors regularly travel from all across the country and overseas to experience the massive sand dune complex.

The dunes system is crossed by two major east-west highways where traditionally most of the concentrated recreation use has occurred. On the north, State Highway 78 crosses at the small settlement of Glamis. Highway 78 connects Brawley (29 miles west of Glamis) with Blythe (60 miles northeast of Glamis). At the south end of the Area, Interstate 8 crosses the dunes at Buttercup Valley. Interstate 8 provides access from El Centro, California (40 miles west of Buttercup) and Yuma, Arizona (20 miles east). These highways also provide access from the major urban centers of Los Angeles, San Diego, Phoenix, and Tucson. All are within a days drive of the Area. The BLM estimates that every year over 600,000 OHV recreationists visit the Imperial Sand Dunes. Many OHV riders come only for a one day use. Others come with families and friends to camp in sites along or near access roads and developed camping facilities.

OHV camping as well as riding use of the dunes tends to be concentrated. Camping areas are along Gecko Road, Dune Buggy Flats and Patton Valley on the west side. On the east side, Garbage Flat, Glamis Flat and the "Washes" road are popular for camping and OHV access to the dunes. Along Interstate Highway 8, Buttercup, Midway Well and Plank Road camping areas are all popular for camping and for riding between the highway and the border with Mexico.

Air Quality: Air quality in Imperial County is entirely non-attainment for ozone and partially non-attainment for PM-10. No air quality monitors are located in the ISDRA, therefore the local ozone and PM-10 levels for the dunes are not known.

Visual Resources: The landscape is characterized as panoramic, composed mainly of long, horizontal, simple lines created by the dune ridge lines. The overall texture is a fine to medium one, with smooth dunes and patchy or broken vegetation dominant. The desert colors are muted shades ranging from desert brown and sand beige to juniper green (Munsell Soil Color Charts). The VRM Objective class for the involved BLM lands is Class 2. Visual resource management objectives for Class 2 lands are to retain the existing character of the landscape. The level of change to the characteristic landscape should be low.

ENVIRONMENTAL EFFECTS:

Critical Element		Alternative 1		Alternative 2		
		Affected?		Affected?		
		Yes	No	Yes	No	Initials
Air Quality			X		X	
ACEC's			X		X	
Cultural Resources		X		X		
Environmental Justice			X		X	
Hazardous Waste			X		X	
Farmlands, Prime/Unique			X		X	
Floodplains			X		X	
Native American Religious Concerns			X		X	
Noxious and Invasive Species (Weeds)			X		X	
T&E Species	Wildlife	X		X		
	Plants	X		X		
Visual Resources			X		X	
Water Quality			X	X		
Wetlands/Riparian Zones			X		X	

Wild & Scenic Rivers		X		X	
Wilderness	X			X	
Recreation	X			X	

DESCRIPTION OF IMPACTS:

Alternative 1. Proposed Action: Closure to Motorized Vehicle Use of Five Areas in the Imperial Sand Dunes Recreation Area.

Air quality: Local air quality in the dunes varies depending on the season. On busy weekends from October through April there may be as many as 100,000 recreationists at the dunes. These visitors bring with them motorcycles, jeeps, quads and dune buggies. Many of these vehicles have two-stroke engines, greatly increasing the amount of exhaust emissions produced compared to four-stroke engines. Air quality in the dunes, especially vehicle emissions, is more influenced by the numbers of vehicles present in the dunes and not the locations their riders choose to use them. Closing the five parcels would not be expected to reduce the total numbers of OHV riders using the dunes. Any riders displaced by the closures may move to other locations in the dunes to ride. Therefore the closures would have little, if any, affect on emissions reduction in the dunes.

Soils and Watershed: Disturbance to clay soils in the interim closed areas would be reduced. OHV surface disturbance in sandy areas is less likely than in areas with clay surfaces, therefore a negligible positive effect is expected to result.

OHV effects to the watersheds may occur in the washes along the east side of the dunes, particularly south of Highway 78. On the east side of the dunes camping and OHV staging in and along washes would have reduced disturbance of existing vegetation and biotic crusts and effects on wash morphology by the interim closure.

Vegetation: Monitoring of the special status plants conducted by BLM in 1998 identified several areas in the dunes where large colonies of Peirson's milk-vetch occur. Areas identified for the five closures contain many of these high density colonies according to the monitoring studies. In addition, Parcel 5 (small southern closure) may eventually be developed as an interpretive site for dunes natural history and ecology.

Recent OHV use has been low in much of the habitat that would be protected by the closures because the parcels are far from camping and staging areas. As a result, habitat in these areas is relatively intact, meaning that few OHV tracks cross the areas. Because OHV use in the closed areas has historically been very light displacement effects, if any, on resources outside the closed areas would be minimal and would not be expected to result in measurable effects on the Peirson's milk-vetch. The vehicle closures are designed to protect the highest density populations of Peirson's milk-vetch. Therefore, an overall positive net effect to the Peirson's milk-vetch and other plants of the central dunes is expected.

Noxious & Invasive Species (Weeds): It is presumed that introduced species are not able to adapt to the dryness and constantly blowing and shifting sand. It is expected that the interim closures will have no effect on noxious weeds.

Wildlife: The Imperial Sand Dunes Recreation Area generally receives OHV use during the winter months, however, hibernating reptiles, amphibians and mammals, as well as those emerging in the spring, may become displaced, crushed, maimed, or predated as a result of OHV use. Bondello & Brattstrom (1979) found with regard to spadefoot toads, “The emergence of *S. couchi* in response to motorcycle sounds represents a potentially deleterious impact on spadefoot toad populations.” In addition, the authors also found that, “data clearly indicate dune buggy sounds of comparatively moderate intensity and short duration contain sufficient acoustical energies below 3Khz to induce hearing loss in *Uma scoparia*.” *Uma notata*, the Colorado Desert fringe-toed lizard, would be expected to undergo the same loss of auditory senses. The authors also report that, “Indigenous sand dune inhabitants are concluded to be unable to tolerate ORV impacts. While wildlife resources may be directly or indirectly impacted by OHV use, wildlife habitat is also at risk. Luckenbach & Bury (1983) report that, “The findings of this study clearly demonstrate that ORV activities in the Algodones Dunes are highly detrimental to dune biota. Both herbaceous and shrubby perennial vegetation are greatly reduced where ORVs operate. The sand-adapted desert kangaroo rat (*D. deserti*) and fringe- toed lizard (*Uma notata*) are severely reduced in areas frequently used for ORV recreation. Judging from information obtained from tracks, there is also a marked decline in the number of arthropods in ORV-used areas.” Based on this information, wildlife resources would be expected to benefit from Alternative 1 in the closed areas.

Wilderness: This alternative may reduce OHV intrusions from the northern most boundary of the North Algodones Dunes Wilderness by adding a buffer to the existing wilderness boundary. This will have an overall net increase to wilderness values of the area providing better protection.

Visual Resources: The degree to which an action affects the visual quality of the landscape can be measured in terms of the impacts to the elements of form, line, color, and texture of the landscape. The degree of contrast created by the proposed project would be weak. The Carsonite posts used to mark the closure boundaries would be seen but would not attract a significant amount of attention because of their size in the scale of the dunes landscapes.

Cultural Resources: The BLM’s analysis is based on a 1% inventory. The closures will protect any sites that are within the closure boundaries. Since the projected use in these areas by OHVs is low, displacement is suggested to have a negligible effect on cultural resources. Areas outside of the proposed interim closure still remain largely unprotected. A positive net benefit should be experienced by cultural resources as a result of the proposed interim closure.

Recreation: Implementation of the proposed closures will displace some (OHV) recreation use and will have an overall negative impact to off-highway vehicle recreation. Although the use numbers are determined to be minimal, those that visited the interim closure areas have done so historically. They tend to seek these areas because of their remoteness and challenge. Because of the unique nature of their sport, there are very few places on public land where this activity can be enjoyed, thus limiting their choices for alternative locations. It is assumed that most will remain at that the Imperial Sand Dunes adding to the large numbers that presently recreate in the higher use areas. This could increase the likelihood of conflicts between visitors: more vehicle accidents and rider injuries, especially during the busy season of October through May. Negative effects on visitor safety, use patterns and recreational experiences, resource, and economic impacts may occur because visitors are concentrated into a smaller area.

The BLM would need to increase staff presence in the dunes, especially on high-visitation weekends. BLM park rangers and law enforcement rangers will monitor camping and other use patterns in the recreation area. Should undue adverse effects be discovered, BLM would determine the appropriate response to protect dunes resources.

The closures could have a positive effect on non-motorized recreational uses. The North Algodones Dunes Wilderness currently is the only area of the interior dunes designated for non-motorized recreation. Hikers, birders and backpackers would be more likely to visit the closure areas since there would be less motorized vehicle use.

DESCRIPTION OF MITIGATION MEASURES AND RESIDUAL IMPACTS:

Cumulative Impacts: Some amount of vandalism, either direct or indirect, would be expected during the interim closure. BLM would mitigate this effect through increased patrols and attention to OHV effects on resources. Potential undue degradation or effects would be analyzed and appropriate protective actions taken.

Off-highway vehicle use patterns would change, especially in the area of the Small Central Closure (Closure 2). OHV users would be required to go around the closure area in order to access the high use open area. Closure 2 is between the intensive use area where the dune users camp along Gecko Road and where they typically ride their sand equipment in the deep dunes. Increased law enforcement would be necessary in order to maintain compliance with all of the closures.

Although most users are expected to remain in the Imperial Sand Dunes because of the unique nature of the duning activity, it has been reported that OHV users have been displaced by the closures to the Coachella Valley. Such displacement has also been reported in the Dumont Dunes (BLM rangers: Meyers, Blatchley, Tracy, pers. coms. 2001). The Manager of the Coachella Valley Preserve also reports this displacement effect at the Edom Hill - Willow Hole Preserve in the Coachella Valley

(Barrows, pers. com. 2001). Other areas where users may have been displaced to include the Superstition Mountains Open Area and the Ocotillo Wells State Vehicular Recreation Area. The extent of this displacement has not been quantified.

Alternative 2. No Action Alternative: Closures Would Not Be Implemented:

Air Quality: Air quality in the dunes, especially vehicle emissions, is influenced more by the total number of vehicles present than by the locations riders choose to use. This alternative would not result in a dramatic difference in the total numbers of OHV riders in the dunes, thus, affects to air quality would not be expected to be different than the proposed action.

Soils and Watershed: The areas within parcels 1 and 3 currently receive little OHV use. If the interim closure were not implemented, any current amount and rate of soil erosion would continue at the same rate as if the closures were implemented..

If the Northern Closure (Parcel 1) and the Large Central Closure (Parcel 3) were not closed for the interim period, some amount of continued disturbance would continue to the washes on the east side of the dunes. Vegetation and biotic soil loss would continue to occur. There could be effects from disturbances to water flow rate and infiltration.

Vegetation: Effects of OHV traffic within the proposed interim closure areas would occur to plants and their habitat at the present rate in the five parcels. These five parcels were identified because of the high density colonies of Peirson's milk-vetch. The effects of OHV use on Peirson's milk-vetch are not currently known. Increased use in any of the closure areas may have a detrimental effect on the species as well as the other plant species that inhabit the dunes.

Noxious & Invasive Species (Weeds): It is presumed that introduced species are not able to adapt to the dryness and constantly blowing and shifting sand. thus, affects to noxious weeds would not be expected to be different than the proposed action.

Wildlife: Wildlife and wildlife habitat in the proposed closure areas would continue to be affected by OHV use at current levels in all parcels. Present levels of use in most of the area proposed for closure is low and dispersed. If visitation to the closure areas were to increase, impacts to wildlife could also increase. The Imperial Sand Dunes Recreation Area generally receives OHV use during the winter months, however, hibernating reptiles, amphibians and mammals, as well as those emerging in the spring, may become displaced, crushed, maimed, or predated as a result of OHV use. Bondello & Brattstrom (1979) found with regard to spadefoot toads, "The emergence of *S. couchi* in response to motorcycle sounds represents a potentially deleterious impact on spadefoot toad populations." In addition, the authors also found that, "data clearly indicate dune buggy sounds of comparatively moderate intensity and short duration contain sufficient acoustical energies below 3Khz to induce hearing loss in *Uma scoparia*." *Uma notata*, the Colorado Desert fringe-toed lizard, would be expected to undergo the same loss of auditory senses. The authors also report that,

“Indigenous sand dune inhabitants are concluded to be unable to tolerate ORV impacts. While wildlife resources may be directly or indirectly impacted by OHV use, wildlife habitat is also at risk. Luckenbach & Bury (1983) report that, “The findings of this study clearly demonstrate that ORV activities in the Algodones Dunes are highly detrimental to dune biota. Both herbaceous and shrubby perennial vegetation are greatly reduced where ORVs operate.

The sand-adapted desert kangaroo rat (*D. deserti*) and fringe-toed lizard (*Uma notata*) are severely reduced in areas frequently used for ORV recreation. Judging from information obtained from tracks, there is also a marked decline in the number of arthropods in ORV-used areas.” This data indicates that the no action alternative will have an adverse effect on wildlife.

Wilderness: No effects would occur to wilderness areas.

Cultural Resources: Possible damage to cultural resources resulting from OHV activity would continue.

Recreation: No impacts to OHV recreation would be anticipated with this alternative. No information is known of the potential for effects on non-OHV users from continued OHV use of the closure areas. Non-motorized use of the dunes is confined to the edges during the winter. Alternative forms of recreation, such as hiking, birding, horse-back riding and photography, may increase in the closures because of the absence of motorized vehicles. The North Algodones Dunes Wilderness is currently the only area for non-motorized recreation.

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Reviewer: _____ Date: _____
Environmental Coordinator

MAP 1

On separate page in Adobe Acrobat (PDF) file

MAP 2

On separate page in Adobe Acrobat PDF file

MAP 3

On separate page in Adobe Acrobat PDF file

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA DESERT DISTRICT**

FINDING OF NO SIGNIFICANT IMPACT

**Environmental Assessment
CA-670-EA-2001-58**

**Closure to motorized vehicle use in portions of the Imperial Sand Dunes Recreation Area
May 16, 2001**

Environmental impacts associated with the proposed action and alternatives have been assessed. Based on the analysis provided in the attached EA, I conclude the approved action is not a major federal action and will result in no significant impacts to the environment under the criteria in Title 40 Code of Federal Regulations 1508.18 and 1508.27. Preparation of an Environmental Impact Statement to further analyze possible impacts is not required pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969.

APPROVED BY:

Field Manager
El Centro Field Office

Date

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